

L 26482-65 EWT(m)/ENP(j) PC-4 RM  
ACCESSION NR: AR5004855

S/0058/64/000/011/E032/E033

25  
13  
B

SOURCE: Ref. zh. Fizika, Abs. 11E263

AUTHORS: Dobrzhanskiy, G. F.; Perekalina, Z. B.; Sorokina, V. V.

TITLE: Procedure for growing stilbene crystals in sealed test tubes using oriented primers

CITED SOURCE: Sb. Sistemillyatory i stsintillyats. materialy. Khar'kov, Khar'kovsk., un-t, 1963, 54-55

TOPIC TAGS: stilbene, single crystal, crystal growth, oriented primer

TRANSLATION: An improved procedure of growing stilbene single crystals is described. Unlike the presently employed procedure of growing in open test tubes, it is proposed to carry out the process in sealed ampoules using oriented primers. It was established experimentally that the primer must be oriented along the (001) cleavage plane; a method is described for preparing such primers. The crystallizing substance in the form of compressed tablets is fed on top of a primer,

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which is lowered to the bottom of the test tube. The procedure prevents decomposition of the substance and ensures safety of the operating personnel against the toxic action of the stilbene vapor. Ye. Givargizov.

SUB CODE: SS

ENCL: 00

Card 2/2

DEMIDOV, N.V., kand.veterinarnykh nauk; SOROKINA, V.V., veterinarnyy vrach

Clinical picture of monieziasis of lambs. Trudy VIGI 6:266-268  
'59. (MIRA 15:5)

(Moniezia)  
(Parasites--Lambs)

BOYENKO, I.D.; SOROKINA, V.Ye.

Comparative characteristics of some functional changes in singing and speaking types of respiration in singers. Fiziol. zhur. 50 no.12:1437-1443 D '64. (MIRA 18:9)

1. Kafedra normal'noy fiziologii Meditsinskogo instituta, Voronezh.

PASHCHENKO, N.M.; SOROKINA, Ye.D.; BARANOVA, V.G.

Quantitative determination of acetonitrile in isoprene, isoamylanes  
and their mixtures from infrared absorption spectra. Zav. lab. 31 no.2:  
178-179 '65.  
(MIRA 18:7)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo  
kauchuka.

SOROKINA, Ye.(S)

3(5)

PHASE I BOOK EXPLOITATION

SOV/1798

Buzulutskov, Fedor Semenovich, Tamara Ivanovna Gurova, Lidiya Illarionovna Korobeynikova, Viktoriya Aleksandrovna Pluman, Antonida Grigor'-yevna Poda, Yevgeniia Gerbetovna Sorokina, and Klavdiya Vasil'yevna Yaskina

Litologiya mezozoja i kainozoja Zapadno-Sibirskoy nizmennosti (Mesozoic and Cenozoic Lithology of the West Siberian Plains) Moscow, Gostoptekhizdat, 1957. 187 p. 1,000 copies printed.

Sponsoring Agencies: USSR. Ministerstvo neftyanoy promyshlennosti, and Zapadno-Sibirs'kiy gosudarstvennyy nefterazvedochnyy trest.

Ed.: V.G. Vasil'yev; Exec. Ed.: Ye.G. Pershina; Tech. Ed.: E.A. Mukhin

PURPOSE: This book is intended for lithologists, petrographers, stratigraphers, and exploration geologists in general.

COVERAGE: The book describes the methods and results of lithological and petrographic studies of Mesozoic and Cenozoic sediments conducted in the area of the West Siberian Plains during the period 1950-1954. An analysis is made for each stratigraphic component of the mineral - Card 1/7

Mesozoic and Cenozoic Lithology (Cont.)

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petrographic composition of the rocks and the mineral-petrographic correlations. A comparison between the studied cross-sections is also made. The facies characteristics of sedimentation for individual periods in the geological history of the regions and the variations in these characteristics in space and time are discussed. Conditions favorable for the formation and migration of gases and petroleum during Mesozoic time and the possible accumulation of petroleum and gas on an industrial scale in Western Siberia are examined. There are 34 figures, 11 tables, a supplement containing 5 maps. There are 35 Soviet references.

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Ch. II. Lithologic and Petrographic Characteristics and the Mineralogical Composition of Mesozoic and Cenozoic Sediments of the Central and Southern Parts of the West Siberian Plains	7

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SOROKINA, Ye.G.

Lithologic and facies features of the Upper Cretaceous in the  
Novyy Vasyugan area. Trudy SNIIGGIMS no.1:168-170 '59.  
(MIRA 15:4)  
(Novyy Vasyugan region--Geology, Stratigraphic)

3(8,5)

SOV/11-59-6-4/15

AUTHORS: Gurova, T.I. and Sorokina, Ye.G.

TITLE: On the Upper-Cretaceous Iron Ores in the Eastern Part of the West-Siberian Lowland

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 6, pp 52-61 (USSR)

ABSTRACT: The authors describe iron ore deposits discovered in 1950-1956 in the eastern region of the West-Siberian lowland, in the Kolpashevo and Narym districts and along the Ket', Vasyugan and Yeloguy rivers of Tomsk oblast'. The deposits were associated with the sand-argillaceous strata of the Upper Cretaceous period. Ore-bearing beds are disposed in two horizons; the lower belongs to the Turonian, and the upper - to Senonian stages. The bed found only along the river Ket' belongs to the Eocene epoch of the Tertiary period. The lower horizon is the most widely spread in the region; its lower part is formed of argillaceous, slightly cemented aleurolites with greenish-

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On the Upper-Cretaceous Iron Ores in the Eastern Part of the West-Siberian Lowland

brown sandstone seams. The main concentration of the iron ore, about 8 m thick, is located in the upper part of the horizon. It consists of dark-brown, finely grained iron ores of various composition cemented by the ferruginous-chlorite material; it is usually covered with a 2 m thick bed of argillaceous siderites. The horizon is about 20 m thick along the Vasyugan river, 14 m - in the Narym district and 10-12 m thick in the Kolpashevo district. The upper horizon contains a stratum of iron ore up to 18 m thick in some places of the Kolpashevo district. The Eocene horizon of the Ket' river, of little importance, contains about 40% of ferruginous oolites. The gross iron contents of these ores is as follows: the hydrohetite-oolite ores - 22% to 48.04%, sometimes the iron contents were as high as 63.4% in the southern part of the Kolpashevo district; the lepto-chlorite-oolite ores - 38% to 45.48%; the hydrohetite-leptochlorite oclite ores - 29.92% to 41.3%. The

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On the Upper-Cretaceous Iron Ores in the Eastern Part of the West-Siberian Lowland

sandy hydrohetite-leptochlorite rocks contain 10.63 to 11.72% of iron and the siderites, which usually form the upper part of the lower horizon, contain 24.76% to 40.04% iron. All these ores represent typical sedimentary rocks formed in shallow coastal maritime conditions of the transgressing Turonian sea. All richer ores were formed in these conditions. According to the authors, the already discovered deposits indicate the existence of favorable conditions for a further occurrence of similar deposits in the eastern region of the West-Siberian lowland. There are 5 Soviet references.

ASSOCIATION: Sibirskiy filial Vsesoyuznogo neftyanogo n.-i. geologorazvedochnogo instituta (Siberian Branch of the All-Union Oil Scientific-Research Geological Prospecting Institute) (VNIIGRI), Novosibirsk

SUBMITTED: May 21, 1957  
Card 3/3

3(5)

AUTHOR:

Sorokina, Ye. G.

SOV/20-128-3-46/58

TITLE:

The Character and Distribution of Recent Mineral Formations in  
the Sandy Deposits of the Ilekskaya Suite of the Parabel'skiy  
Rayon

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 600-603  
(USSR)

ABSTRACT:

In the Parabel'skiy Rayon situated on the middle course of the river Ob', the Hauterive-Barrême sediments (Ilekskaya Suite) are deposited at a depth of about 1450-1500 m (upper limit), and are about 550-600 m thick. The author distinguishes - within this suite - 2 masses of about the same thickness: the upper and the lower one. They are connected by gradual transition. The author characterizes in detail the sandstones of the lower mass. Figure 1 shows a diagram of their granulometric and mineral composition. In both histograms, the quartz- and feldspar content is nearly equal both granulometrically and mineral (35-37%, and 36-38%, respectively). About 20% are consisting of splinters of flint, quartzite, effusive rocks, etc. The mica group shows a limited propagation

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The Character and Distribution of Recent Mineral  
Formations in the Sandy Deposits of the Ilekskaya Suite of the Parabel'skiy  
Rayon

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(up to 5%). In the aleurolites, however, it gains the importance of a rock-forming mineral (up to 20% and over). All rock-forming minerals are more or less changed epigenetically: Quartz is present in the form of irregularly outlined grains as clear as water, often with traces of dissolution. The regeneration of feldspar grains is much less frequent, and was only ascertained for plagioclase grains, but not for K-spars. Among the plagioclases, the processes of sericitization and chloritization, as well as recent epidote formations in the lower mass of the Ilekskaya Suite, are frequent. They give proof of farther-reaching epigenetic changes. The recent epidote formations occur in 2 varieties: (a) as saussurite, (b) as rather well individualized fine crystals (Fig 3). The crystalline biotite form is generally disturbed in the lower mass of the suite, its small plates are deformed, and split in single fibers at the ends (Fig 3). It discolors from brown to greenish, brown and light-brown, and decolorizes due to hydration and loss of iron and alkali (Ref 2). At the same time, large biotite fibers decompose to a fine-scaly

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The Character and Distribution of Recent Mineral SOV/20-128-3-46/58  
Formations in the Sandy Deposits of the Ilekskaya Suite of the Parabel'skiy  
Rayon

chlorite aggregate. Finally, secondary changes of the cement  
are described. There are some publication data on similar  
secondary formation processes of minerals (Ref 1 A. G.  
Kossovskaya and V. D. Shutov, Ref 2). Due to the resultant  
condensation, these rocks can hardly be considered as  
potential collectors of petroleum and natural gas. There are  
3 figures and 2 Soviet references.

ASSOCIATION: Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki  
i mineral'nogo syr'ya (Siberian Scientific Research Institute of  
Geology, Geophysics and Mineral Raw Materials)

PRESENTED: May 27, 1959, by N. M. Strakhov, Academician

SUBMITTED: May 27, 1959

Card 3/3

SOROKINA, Ye.G.

Relationship between the reservoir properties, composition,  
and structure of lower Cretaceous sediments of the middle  
Ob' Valley. Trudy SNIIGGIMS no.9:45-55 '60. (MIRA 14:7)  
(Ob' Valley--Petroleum geology)

SOROKINA, Ye.G.

Mineralogical types of clay in Upper Cretaceous sediments of  
the middle Ob' Valley. Trudy SNIIGGIMS no.10:123-429 '60.  
(MIRA 15:12)

(Ob' Valley--Clay)

SOROKINA, Yo.G.

Stages in the accumulation of Cretaceous sediments in the  
middle Ob' Valley. Trudy SNIIGGIMS no.17:150-156 '61.

(MIRA 15:9)

(Ob' Valley—Sedimentation and deposition)

SOROKINA, Ye. G.

Cand Geol-Min Sci - (diss) "Lithologo-fascial characteristics and collectors of Cretaceous deposits of the Central Ob' Region in connection with an evaluation of the petroleum gas content of this territory." Novosibirsk, 1961. 19 pp; (Ministry of Geology and Conservation of Mineral Resources USSR, Siberian Scientific Research Inst of Geology, Geophysics, and Mineral Resources "SNIIGGIMS"); 200 copies; free; (KL, 10-61 sup, 209)

PEROZIO, G.N.; PROZOROVICH, G.E.; SOROKINA, Ye.G.

Heulandite from Mesozoic and Cenozoic sediments of the West  
Siberian Plain. Trudy SNIIGGIMS no.14:128-132 '61. (MIRA 15:8)  
(West Siberian Plain--Heulandite)

SOROKINA, Ye.G.

Terrigenous-mineralogical complexes and provinces of Cretaceous  
sediments of the middle Ob' Valley. Trudy SNIIGGIMS no.14:133-  
141 '61. (MIRA 15:8)

(Ob' Valley--Geology, Stratigraphic)

SOROKINA, Ye.G.

Classification of Cretaceous marine facies in the middle Ob' Valley.  
Trudy SNIIGGINS no.27:63-71 '62. (MIRA 16:9)

I. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki  
i mineral'nogo syr'ya.  
(Ob' Valley--Geology,Stratigraphic)

SOROKINA, Ye.G.

Some characteristics of the sedimentation of Valangin deposits  
in the central part of the West Siberian Plain in connection  
with the oil potential of that territory. Trudy Inst. geol. i  
geofiz. Sib. otd. AN SSSR no.28:43-47 '64.

(MIRA 17:11)

SOROKINA, Ye.G.

Lithological variability of reservoir rocks according to bed thickness based on a study of Western Siberia. Neftegaz.geol. i geofiz. no.1:19-23 '65. (MIRA 18:5)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

GUROVA, T.I.; NEUIMINA, L.D.; SOROKINA, Ye.G.

Characteristics of the distribution of Jurassic reservoir  
rocks in the West Siberian Plain. Neftegaz. geol. i geof.  
no.5:3-6 '65. (MIRA 18:7)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,  
geofiziki i mineral'nogo syr'ya, Novosibirsk.

SOROKINA, YE.G.

SEREBRYANSKIY, Z.L.; SOROKINA, YE.G.

Agricultural work of students. Est. v shkole no.6:3-8 N-D  
'56. (MIRA 9:12)

1. TSentral'nyy institut povysheniya kvalifikatsii rukovod'yashchikh  
rabotnikov narodnogo obrazovaniya (for Serebryanskiy). 2. Institut  
teorii i istorii pedagogiki Akademii pedagogicheskikh nauk RSFSR  
(for Sorokina).

(Agriculture--Study and teaching)  
(Education of children)

TERENT'YEVA, M.V.; SOROKINA, Ye.I.

Microelement content in the egg of ~~a domestic bird.~~ ~~AN~~  
BSSR 7 no.9:633-634 S '63. (MIRA 17:1)

1. Sektor gerontologii AN BSSR. Predstavлено академиком  
АН BSSR V.A. Leonovym.

SOROKINA, Ye.I.

Accumulation of copper and zinc in the eggs of hens fed with  
salts of these elements. Dokl. AN BSSR 8 no.8 538-540 Ag '64.  
(MIRA 17:11)

1. Sektor gerontologii AN BSSR. Preds avleno akademikom AN BSSR  
V.A. Leonovym.

SOROKINA, YE. I.

Sorokina, Ye. I.

"Changes in plethysmographic indexes and venous pressure in patients with heart defects under the influence of radon baths." Min Health USSR. Central Inst of Spa Studies. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', NO. 25, 1956

SOROKINA, Ye. I.

SOROKINA, Ye.I.

Changes in plethysmographic data and venous pressure in patients with heart failure under the effect of radon baths. Vop.kur., fizioter. i lech. fiz.kul't. 22 no.2:42-47 Mr-ap '57. (MIRA 11:1)

1. Iz terepevticheskogo oteleniya (zav. - prof. N.I .Speranskiy) TSentral'nogo instituta kurortologii (dir. - kandidat meditsinskikh nauk G.N.Pospelova)

(RADON--THERAPEUTIC USE)

(CARDIOVASCULAR SYSTEM--DISEASES)

(PLETHYSMOGRAPHY)

SOROKINA, Ye.I.

Conference of the Academy of Medical Sciences of the U.S.S.R.  
with the participation of scientists and physicians of Eastern  
Siberia and the Far East on problems in regional pathology.  
Vop.kur.fizioter. i lech.fiz.kul't. 23 no.2:185-188 Mr-Apr '58.  
(MIRA 11:6)

(THERAPEUTICS, PHYSIOLOGICAL--CONGRESSES)

SOROKINA, Ye.I. (Moscow)

Changes in estrogen hormone metabolism in hypertension as affected  
by hydrogen sulfide baths. Vrach.delo no.5:489-492 My '58 (MIRA 11:7)

1. Terspekticheskaya klinika (zav. - prof. N.I. Speranskiy)  
TSentral'nogo instituta kurortologii Ministerstva zdravookhraneniya  
RSFSR.

(ESTROGENS)  
(HYPERTENSION)  
(HYDROGEN SULFIDE--PHYSIOLOGICAL EFFECT)

SOROKINA, Ye.I.

Session of the Central Institute of Resort Therapy, devoted to  
the 40th anniversary of the Great October Socialist Revolution.  
Vop.kur. fizioter. i lech fiz. kul't 23 no.6:559-561 N-D '58  
(MIRA 11:12)

(THERAPEUTICS, PHYSIOLOGICAL)

SOROKINA, Ye.I.

Influence of radon baths on the excretion of estrogenic hormones in women with hypertension. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:132-138 Mr-Ap '61. (MIRA 14:4)

1. Iz terapevticheskogo otdeleniya (zav. - prof. N.I. Speranskiy) TSentral'nogo institut kurortologii (dir. - kandidat meditsinskikh nauk G.N. Pospelova).

(RADON—THERAPEUTIC USE) (HYPERTENSION) (ESTROGENS)

AKULOVA, R.F.; BYKHOVSKIY, Z.Ye.[deceased]; VYGODNER, Ye.B.;  
GOL'DFAYL', L.G.; DIK, V.G.; DMITRIYEVA, N.M.; DUBYNINA,  
Ye.I.; LEVIN, B.S.; MEZLIN, S.Ye.; SPERANSKIY, N.I.;  
SOROKINA, Ye.I.; TKACHENKO, A.F.; FREIDIN, Kh.M.;  
CHETVERIKOV, N.S.; VUL'FSON, I.Z., red.; KOKIN, N.M., tekhn.  
red.; FRONINA, N.D., tekhn. red.

[Manual for physicians on the selection of sanatoriums and  
health resorts] Rukovodstvo dlia vrachei po sanatorno-  
kurortnomu otboru. Pri uchastii R.F.Akulovoi i dr. 2 izd.,  
dop. i ispr. Moskva, Medgiz, 1963. 511 p.

(MIRA 16:12)

(SANATORIUMS)

(HEALTH RESORTS, WATERING PLACES, ETC.)

SPERANSKIY, N.I., prof.; SOROKINA, Ye.I.

Hexamethonium of sympathetic ganglionitis with cardiac pain syndrome. Ter. arkh. 35 no.4:13-19 Ap'63 (MIRA 17:1)

1. Iz terapevticheskogo otdeleniya (zav. - prof. N.I.Speranskiy) TSentral'nogo instituta kurortologii i fizioterapii.

SPERANSKIY, N.I.prof.; SOROKINA, Ye.I. (Moskva)

Coronary pain syndrome in sympathetic ganglionitis. Klin. med. 41  
no.7:13-18 Jl '63 (MIRA 16:12)

1. Iz terapeuticheskogo otdeleniya (zac. - prof. N.I.Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N.  
Pospelova).

SPERANSKIY, N.I., prof.; SOROKINA, Ye.I.

Expediency of balneological treatment of stenocardia in patients  
with atherosclerosis. Vop. kur. fizioter. i lech. fiz. kul't. 28  
no.3:199-204 My-Je '64. (MIRA 17:5)

1. Iz terapeuticheskogo otdeleniya (zav.-prof. N.I. Speranskiy)  
TSentral'nego instituta kardiologii i fizioterapii (dir. - kand.  
med. nauk G.N. Pospelova).

BELAYA, N.A.; SOROKINA, Ye.I.

Comparative studies on clinical and electromyographic indices in cervico-thoracic radiculitis and ganglionitis. Zhur. nevr. i psikh. vol. 64 no.5:690-693 '64. (MIRA 17:7)

l. Tsentral'nyy institut kurortologii i fizioterapii (direktor G. N.Pospelova), Moskva.

SCROKINA, Ye.I.

Effect of carbondioxide baths on the secretion of estrogenic hormones in hypertension. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.2:134-138 Mr-Ap '64 (MIRA 18:2)

1. Terapeuticheskoye otdeleniye (zav. - prof. N.I. Speranskiy) TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova), Moskva.

SOROKINA, Ye.I.

Results of the use of microwave therapy in patients with sympathicocoganglionitis and radiculitis of the cervicothoracic section with the cardiac pain syndrome. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.1:40-45 Ja-F '65. (MIRA 18:8)

1. Terapevticheskoye otdeleniye (zav.- prof. N.I. Speranskiy) kliniki TSentral'nogo instituta kurortologii i fizioterapii (dirkotor - dotsent G.N. Pospelova), Moskva.

SPERANSKIY, N.I.; SOROKINA, Ye.I.; BELAYA, N.A.

Use of massage in cervical-thoracic radiculitis and sympathico-ganglionitis with cardialgia syndrome. Zhur. nevr. i psikh. 65 no.2:222-227 '65. (MIRA 18:9)

1. TSentral'nyy institut kurortologii i fizioterapii (direktor - dotsent G.N. Pospelova), Moskva.

ACC NR: AT7011650

SOURCE CODE: UR/0000/66/000/000/0211/0212

AUTHOR: Barer, A. S.; Golov, G. A.; Zubavin, V. B.; Sorokina, Ye. I.; Tikhomirov, Ye. P.

ORG: none

TITLE: Oxygen balance of an organism at prolonged accelerations

SOURCE: International Astronautical Congress. 17th, Madrid, 1966. Doklady. no. 12. 1966. Kislородный баланс организма при длительной воздействующих на него ускорениях

TOPIC TAGS: biologic acceleration effect, animal physiology, dog, hypoxia, space physiology, human physiology

ABSTRACT:

The author reviewed the literature as well as experiments on humans (1500 tests using 120 subjects) and white rats (375 tests). He stated that changes in oxygen balance in humans are one of the main factors limiting prolonged G tolerance. This is primarily due to circulatory and respiratory functions which are directly affected by accelerations. The magnitude of these changes depends on the magnitude and duration of accelerations.

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Changes in external respiration including gas exchange during accelerations can be attributed to biomechanical difficulties and disrupted pulmonary circulation. Here, increased work by diaphragm muscles increases oxygen consumption. At high acceleration magnitudes (12 G and higher), this disruption of gas exchange renders the entire external respiratory process "unprofitable," or inefficient.

Up to 8-12 G, there is an increase in the activity of pulmonary ventilation reflected in accelerated respiration and an increase in per-minute volume. A further increase in acceleration magnitude leads first to relative and then to an absolute decrease in volumetric indices of external respiration. With an increase in acceleration, there is a steady 200 ml/G decrease. An increase in the per-minute respiratory volume in the 8-12 G range is associated with increased O<sub>2</sub> consumption and elevated CO<sub>2</sub> elimination. However, the relative efficiency of pulmonary ventilation decreases as acceleration magnitude increases. The percentage content of O<sub>2</sub> in respired air increases while CO<sub>2</sub> decreases. An analysis of the literature and data from the author's experiments indicate that the nature of qualitative changes in the gaseous composition of respired air is associated with an

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increase in physiologically dead space due to changes in pulmonary circulation. Accelerations cause arterial hypoxemia, the severity of which depends on acceleration magnitude and duration. Beyond a dependence on acceleration magnitude, the level of hemoglobin decreases by 60-65%. The general oxygen requirement under these situations also does not depend on acceleration magnitude and is a constant value.

The circulatory system plays a leading role in supplying oxygen to the brain during acceleration. In experiments on human subjects, cerebral circulation and circulation in external vessels of the head were monitored. The force vector of acceleration plays an important part here, especially the longitudinal component. When the value of this component reaches 1.6-1.3 G, there is an increase in the pulsed pooling of cerebral vessels. At 3 G, a normal situation prevails while at 5 G, blood pooling decreases by a factor of two. EEG data was used as an index of the state of cerebral circulation.

In experiments with animals, general oxygen consumption, oxygen tension in tissues, and the tissue

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oxidation reduction potential were studied. Here, it was established that during accelerations, there is a displacement of oxygen balance in various tissues with a tendency toward insufficient oxidation which depends on acceleration magnitude and duration as well as specific metabolic qualities of the tissues under study. For instance, the period necessary for the elimination of oxygen depth in the brain was 1.5—2.0 times shorter than for skeletal muscles.

In experiments where animals and humans were exposed to various atmospheric conditions during acceleration (normal, increased oxygen partial pressure, and decreased barometric pressure to 405 mm Hg), it was found that increased oxygen pressure improved resistance to prolonged accelerations. However, when general and cerebral hemodynamics were disrupted due to a high longitudinal acceleration component, this positive effect was eliminated by a disruption of gas exchange. Increased oxygen partial pressure (100 mm H<sub>2</sub>O) increased human tolerance of 12 G by 35—40 sec. [ATD PRESS: 5098-F]

SUB CODE: 06 / SUBM DATE: none

Card 4/4

SOROKINA, YE. I.

USSR/Physics  
Ultrasonic Diffusers  
Sound - Speed

Feb 49

"Ultrasonic Diffusion in Solutions," B. B. Kukryavtsev, Ye. I. Sorokina, 6 pp

"Zhur Ekspert i Teoret Fiz" Vol XIX, No 2

Measures speed of sound in various mixtures at various temperatures by means of acoustic interferometer. Density of mixture was taken at time of experiment. Calculates molar speeds of sound in mixtures. Results show that molar speed is independent of temperature. Within limits of experimental accuracy, molar speeds of sound in mixtures are additive function of the mixture composition, and additive function of the bonds in the molecules. Deviations from this rule are probably due to formation of molar compounds which decompose with rise of temperature. Suggests method for approximate determination of molecular weight of dissolved substances. Submitted 29 Jun 48.

PA 32/49T82

MINDER, A.F.; SOROKINA, Ye.I.

Selectifiers instead of knotters. Bum. prom. 36 no.8:20-21  
(MIRA 14:8)  
Ag '61.

1. Solikamskiy kombinat.  
(Papermaking machinery)

BARER, A.S.; GOLOV, G.A.; SOROKINA, Ye.I.

Physiological reaction of the human body during the action of maximum accelerations in time and intensity, directed along the spinal-thoracic axis. Change in the system of external respiration. Biul. eksp. biol. i med. 56 no.8:33-37 Ag '63.  
(MIRA 17:7)

1. Predstavleno deystvitel'nym chlenom AMN SSSR V.V. Parinym.

BARER, A. S.; GOLOV, G. A.; ZUBAVIN, V. B.; MURAKHOVSKIY, K. I.; RODIN, S. A.; SOROKINA,  
Ye. I.; TIKHOMIROV, Ye. P.

"Physiological reactions of the human organism to transverse accelerations and  
some means of raising the resistance to such probes."

report submitted to 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

SOLOV'YEVA, N.K., SOROKINA, Ye.I.

Characteristics of the producer of Violarin I, a new antivirus  
[with summary in English] Antibiotiki 3 no.4:19-23 Jl-Ag '58  
(MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy instituta antibiotikov.  
(ANTIBIOTICS)

KUZNETSOV, V.D.; SOROKINA, Ye.I.; VIKHROVA, N.M.; KRYUCHKOVA, T.I.; KLEOPINA,  
G.V.; KHOKHLOV, A.S.

Producer of actinomycin belonging to the fluorescent group of  
actinomycetes. ~~Zavod~~ Inst. microbiol. no.8:193-201 '60.  
(MIRA 14:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,  
Moskva.

(ACTINOMYCETALES) (ACTINOMYCIN)

SOROKINA, Ye.I., starshiy nauchnyy sotrudnik

Some publications on health resort facilities. Vop. kur., fizioter.  
i lech. fiz. kul't. 26 no.3:270-271 My-Je '61. (MIRA 14:7)

1; Tsentral'nyy institut kurortologii i fizioterapii.  
(BIBLIOGRAPHY—HEALTH RESORTS, WATERING PLACES, ETC.)

KUZNETSOV, V.P.; DZAGILA, N.M.; BOPOKINA, Ye.I.; ARYUTIN, I.F.

Some problems of storing actinomycetis and fungus cultures under  
laboratory conditions. Mikrobiologiya 31 no.4:731-737 Jl-Ag '62.  
(MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

I. Ormoh-57 EWF(1) SCFB DD/GD

ACC NR: AF6036664

SOURCE CODE: UR/0000/66/000/000/0348/0350

AUTHOR: Sorokina, Ye. I.

ORG: none

TITLE: Interdependence of a number of oxygen regime indices during exposure of the organism to lowered barometric pressure and prolonged accelerations [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 348-350

TOPIC TAGS: hypoxia, biologic acceleration effect, space physiology, combined stress, hypodynamia, rat, biologic metabolism, biologic oxidation, muscle physiology

ABSTRACT:

In order to evaluate the system of regulation of oxygen balance in the organism, it is necessary to have information concerning the dynamics of the process under study on various levels of the oxygen cascade, while at the same time it is necessary to have direct information concerning the

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ACC NR: A10036664  
level of oxidation-reduction reactions per se. In this connection, an attempt was made to evaluate the complex of oxygen-metabolism indices ( $qO_2$  -- the amount of oxygen consumed by the organism,  $pO_2$  -- oxygen tension in tissues, Eh -- the oxidation-reduction potential) under conditions of various types of hypoxia: hypoxic hypoxia (during elevation in pressure chambers), and a mixed form of hypoxia (with the presence of a hypodynamic factor during transverse accelerations).

Special significance was attached to the oxidation-reduction potential which reflects the relationship of the activities of oxidative [Ox] and reductive [Red] forms in the oxidation-reduction system.

Experiments were conducted on a centrifuge with an acceleration of 25 G for 6 min, and in a pressure chamber at elevations of 5000 m (405 mm Hg.), 8000 m (265 mm Hg), and 10,000 m (199 mm Hg) with equal exposure periods. The oxygen tension and the oxidation-reduction potential were determined in brain and muscle tissues. A total of 450 experiments was performed with white Wistar rats.

During the period of increase of the active stress factor (speeding-up of the centrifuge, the "ascent" in the pressure chamber), a marked drop

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ACC NR: A16036664

in the oxygen tension and the oxidation-reduction potential in brain and muscle tissues takes place. However, at the beginning of this period the above-noted changes proceed with a relatively lesser intensity.

The "plateau" (the period at which the required magnitude of the affecting factor is held constant) is characterized by quickly increasing changes in the oxygen balance of the organism. The rate and degree of these changes are in strict relationship to the magnitude of the affecting factor. The oxygen tension continues to drop, but with a lesser gradient than during the initial period. At the same time, a sharp drop in the magnitude of the oxidation-reduction potential takes place, as is evident from the constant change in the relationship between the concentration of the oxidation and the reduction phases in the direction of a relative dominance of the reduction phase.

Afterwards, a restoration takes place in the organism and the normal stable condition is achieved, as is evident from the gradual normalization of the parameters studied. Oxygen tension is the first to return to its normal level (5--10 min). The oxidative-reductive potential requires 30--40 min to achieve normalcy. During the period of maximum growth, the oxidation-reduction potential manifests itself in more intense oxygen

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L 08864-67

ACC NR: A16036664

consumption by the organism. The restoration period for brain tissues  
is significantly shorter than for muscle tissues.

The results of the experiment confirm the point of view that the dynamics  
of oxidative processes proceed at different rates at various stages of the  
oxygen cascade and at different rates in different tissues. On the other  
hand, the experiments indicate the necessity for a complex evaluation of  
phenomena in order to evaluate the level of oxygen availability for the  
organism as a whole. [W.A. No. 22; ATD Report 66-116]

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SUB CODE: 06 / SUBM DATE: 00May66

Card 4/4 egk

LARIONOV, L.F.; MANOYLOV, S.Ye., doktor meditsinskikh nauk, zaveduyushchiy;  
RYSKINA, S.I.; SOROKINA, Ye.L.; POBEDINSKIY, M.N., professor, direktor.

Biochemical changes of nucleoproteids of malignant tumors under the effect  
of X-rays. Vest.rent.i rad. no.3:3-6 My-Je '53. (MLRA 6:8)

1. Biokhimicheskoye etdeleniye TSentral'nogo nauchno-issledovatel'skogo  
rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR  
(for Manoylov, Larionov, Ryskina and Sorokina). 2. TSentral'nyy nauchno-  
issledovatel'skiy rentgeno-radiologicheskiy institut Ministerstva zdra-  
vookhraneniya SSSR (for Pobedinskiy).

(Tumors) (X-rays--Therapeutic use)

SOLOMINA, Ye.N., SOROKINA, Ye.M.

Neurodystrophic arthritis in coronary disease. Sov.med. 22 no.8:  
108-114 Ag '58 (MIRA 11:10)

1. Iz obshchey i gospital'noy terapevcheskoy kliniki (dir. -  
deystvital'nyy chlen AMN SSSR prof. Ye.M. Tareyev) sanitarno-  
gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo  
instituta imeni I.M. Sechenova na base 24-y gorodskoy bol'nitsy  
(glavnnyy vrach V.P. Uspenskiy).

(CORONARY DISEASES, compl.

arthritis, neurodystrophic (Rus))

(ARTHRITIS, compl.

neurodystrophic, in coronary dis. (Rus))

ZHERDEVA, L.G.; SOROKINA, Ye.N.; SLABKOVSKAYA, O.A.

Composition of solid paraffins obtained from sulfurous petroleum.  
Khim. i tekhn. tsvet. i masel 10 no.3:26-29 Mr '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke  
nefti i gazov i polucheniyu iskisstvennogo zhidkogo topliva.

MAKUNINA, A. A.; SOROKINA, Ye. P.; BUCHKOVSKIY, E. S.

Secondary halos of dispersion in the copper-cobalt deposits  
of the Southern Urals. Vop. geog. no.59:53-81 '62.  
(MIRA 16:1)

(Ural Mountains—Ore deposits)  
(Ural Mountains—Geochemical prospecting)

VOSKRESENSKIY, S.S.; POSTOLENKO, G.A.; SIMONOV, Yu.G.; PATYK-KARA, N.G.; ANAN'YEV, G.S.; PIMENOVA, R.Ye.; YEVTEYEVA, I.S.; KUZNETSOVA, L.T.; SOROKINA, Ye.P.; ZORIN, L.V.; SLADKOPEV'TSEV, S.A.; ARISTARKHOVA, L.B.; MEDVEDEVA, N.K.; LOPATINA, L.I., red.

[Geomorphological studies; work experience in southeastern Transbaikalia, eastern Fergana, central Kazakhstan, and the Caspian Lowland] Geomorfologicheskie issledovaniia; opyt rabot v Iugo-Vostochnom Zabaikal'e, Vostochnoi Fergane, Tsentral'nom Kazakhstane i Prikaspiskoi nizmennosti. Moskva, Izd-vo Mosk. univ., 1965. 275 p. (MIRA 18:7)

USYUKIN, I.P.; SHLEYNIKOV, B.M.; SOROKINA, Ye.S.

Solubility of ethylene in certain selective organic solvents at  
low temperatures. Gaz. prom. 8 no.4:40-42 '63. (MIRA 17:10)

CHERKINSKIY, Boris Mendeleyevich; TOKAREV, Dmitriy Georgiyevich;  
MAREYEVA, Anna Gerasimovna; ZOTOV, Petr Petrovich;  
GORODOV, K.I., retsenzent; SOROKINA, Ye.V., retsenzent;  
MOTORIN, I.V., retsenzent; KHALPIN, V.N., retsenzent;  
SHTEYNGART, M.D., red.; PYATNITSKIY, V.N., tekhn. red.

[Handbook for the power engineer in the textile industry]  
Spravochnik energetika tekstil'noi promyshlennosti. [By]  
B.M.Cherkinskii i dr. Moskva, Gizlegprom. Vol.2. [Heat  
engineering] Teplotekhnika. 1963. 615 p. (MIRA 17:2)

53. Manifestations of Psittacosis

"The Clinical Picture of Psittacosis," by Ye. Yu. Sorokina,  
Clinical Department, Institute of Virology imeni Ivanovskiy,  
Klinicheskaya Meditsina, Vol 34, No 12, Dec 56, pp 54-59

Following a brief discussion of previous work on psittacosis, the clinical picture of this disease as reported by several Soviet and foreign authors and investigators is described.

It is noted initially that, at the onset of the disease, no one symptom can be considered characteristic for psittacosis alone. Subsequently, the author discusses an outbreak of psittacosis which was observed by associates of the Institute of Virology, Academy of Medical Sciences USSR, from December 1953 to February 1954 in Moscow. The outbreak, which occurred among workers and persons living in the area of a zoological base where canaries, parrots, turtles, and rabbits were raised, was diagnosed as bronchopneumonia. Persons handling birds were infected first, after which substitute workers became ill. On comparison of symptoms, certain peculiarities were noted. The disease was then diagnosed in an outpatient clinic as: influenza, catarrh of the respiratory tract, typhoid, malaria, or gastritis. Pneumonic manifestations were observed later in the hospital. Simultaneous cases of the disease, some fatal, occurred among "crested" parrots and canaries.

In February 1954, an associate of the Institute of Virology, I. I. Terskikh, carried out virological investigations to determine the etiology of the disease. Quarantine was then imposed, and the epidemiological data, clinical picture of the disease, and positive intracutaneous tests with ornithosis diagnosticum led to a final diagnosis of psittacosis. The course of disease, results of roentgenological investigations, changes in the cardiovascular and nervous systems, urinalyses, and blood picture are presented. One case history is given in detail. The article says that I. I. Terskikh developed a method of diagnosing ornithosis by an intracutaneous skin test which was also proved to be effective for psittacosis. It is mentioned that the complement fixation reaction with patient's serum is also of diagnostic value in psittacosis. The therapeutic effects of sulfonamide preparations and penicillin are discussed. The importance of differential diagnosis between psittacosis and bronchopneumonia and between psittacosis and ornithosis is pointed out, emphasizing the significance of epidemiological factors.

The following conclusions are presented on the basis of these observations:

"1. An outbreak of atypical pneumonia observed among workers of a parrot aviary from the end of December 1953 to March 1954 appeared to be psittacosis. This was verified epidemiologically, clinically, and by virological data.

"2. The intracutaneous test with ornithosis-psittacosis diagnosticum is a valuable diagnostic test in psittacosis.

"3. The usual method of treating pneumonia with sulfonamide preparations and penicillin is ineffectual in psittacosis." (U)

5Um 1454

EPSHTEYN, F.G.; SOROKINA, Ye.Yu.; SEMASHKO, S.A.; DUBNYAKOVA, A.M.

Course of influenza in vaccinated persons [with summary in English].  
Vop.virus. 2 no.4:210-213 Jl-Ag '57. (MIRA 10:12)

1. Klinika Instituta virusologii AMN SSSR, Moskva.  
(INFLUENZA, immunology  
course in vaccinated & non-vaccinated subjects (Rus))

SOROKINA, Ye.Yu.

SOROKINA, Ye.Yu.; TIMOKHOVA, K.I.

Late results of prevention (dispensary treatment) of frequently recurrent influenza. Klin.med. 35 no.5:112-115 My '57. (MLRA 10:8)

1. Iz klinicheskogo otdeleniya Instituta virusologii AMN SSSR imeni Ivanovskogo (dir. - prof. P.N.Kosyakov) i mediko-sanitarnoy chasti No.16 (nach. S.I.Smirnova)

(INFLUENZA, ther.

in outpatient service)

(OUTPATIENT SERVICES

management of recurrent influenza)

EPSHTEYN, F.G., SOROKINA, Ya.Yu., TITOVA, G.V., LESHCHINSKAYA, Ye.V.,  
KNIAYEVA, L.D., SEMASHKO, S.A., DUBNYAKOVA, A.M., ZHUZHIGINA, M.A.,  
MARTYNOVA, G.D.

Clinical and laboratory data on influenza A, in adults according to  
finding during the 1953-1954 epidemic. Zhur.mikrobiol. epid. i  
immun. 29 no.9:29-33 S '58 (MIRA 11:10)

1. Iz Instituta virusologii imeni Ivanovskogo AMN SSSR:  
(INFLUENZA, epidemiology,  
Al, in Russia (Rus))

EPSHTEYN, F.G., prof., SERGEYEV, N.V., prof., SOROKINA, Yc.Yu. (Moskva)

Clinical course of A 57 Asian flu in adults. Klin.med. 36 no.5:35-42  
(MIRA 11:7)

My '58

(INFLUENZA, case reports.  
Asiatic type A 57 in adults (Rus))

EPSHTEYN, F.G.; SOROKINA, Ya.Yu.; KNYAZEVA, L.D.; ALEKSEYEVA, A.A.;  
SLEPUSHKIN, A.N.; KHARAKHASH'YAN, K.T.; ORLOVA, N.N.

Clinical course of type C influenza in adults. Zhur. mikrobiol.  
epid. i immun. 31 no. 10:71-76 O '60. (MIRA 13:12)

1. Iz kliniki Instituta virusologii AMN SSSR na Baze 2-y klinicheskoy  
infektsionnoy bol'nitsy.  
(INFLUENZA)

SOROKINA, Y.Y., LOSHKINA, A.M., KETILADZE, Y.S., KNYAZEVA, L.D., ALEKAZEVA, A.A.

"Some clinical and laboratory observations of influenza during the extrapandemic interval."

Report submitted for the 1st Intl. Congress on Respiratory Tract Diseases of Virus and Rickettsial Origin. Prague, Czech. 23-27 1961.

KITELADZE, Ye.S.; EPSHTEYN, F.G.; ALEKSEYEVA, A.A.; SOROKINA, Ye.Yu.;  
KNAZEEVA, L.D.; LOZHKOVA, A.N.; ZAKSTEL'SKAYA, L.Ya.; KHARAKHASH'YAN,  
K.T.

Clinical and virological study of influenza during the 1959 winter  
outbreak. Vop. virus. 6 no.5:629-6-0 '61. (MIA 15:1)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.  
(INFLUENZA)

KETILADZE, Ye. S.; ALEKSEYFVA, A. A.; SOROKINA, Ye. Yu.; LOZHKOINA, A. N.;  
KNYAZEVA, L. D.; ZANTEL'SKAYA, L. Ya.; LYARSKAYA, T. Ya.

Angina in influenza and adenovirus diseases. Vest. otorin. no.3:  
9-15 '62. (MIRA 15:6)

1. Iz klinicheskogo otdeleniya (nauchnyy rukovoditel' - deystvitel'-nyy chlen AMN SSSR prof. A. F. Bilibin, zav. - dotsent Ye. S. Ketiladze) Instituta virusologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. V. M. Zhdanov) na baze klinicheskoy infektsionnoy bol'nitsy No. 2, Moskva.

(INFLUENZA) (ADENOVIRUS INFECTIONS)  
(TONSILS--DISEASES)

EPSHTEYN, F.G., prof.; AGARKOVA, L.G., kand.med.nauk; DREYZIN, R.S.;  
SOROKINA, Ye.Yu.; LYARSKAYA, T.Ya., kand.med.nauk

Acute respiratory diseases in children caused by the 7a type  
of adenovirus. Sov. med. 25 no.2:81-85 F '62. (MIRA 15:3)

1. Iz Instituta virusologii AMN SSSR (dir. - prof. P.N.  
Kosyakov) i Doma rebenka No.2 (zav. Ye.S. Zhuchina).  
(ADENOVIRUS INFECTIONS)  
(RESPIRATORY ORGANS--DISEASES)

KETILADZE, Ye.S.; KNYAZEVA, L.D.; ALEKSEYEVA, A.A.; SOROKINA, Ye.Yu.;  
LOZHKINA, A.N.

Influenza and acute respiratory diseases of adenovirus etiology  
in adults. Sov.med. 26 no.6:92-99 Je '62. (MIRA 15:11)

1. Iz kliniki (zav. - prof. N.V.Sergeyev [deceased]) Instituta  
virusologii imeni D.I.Ivanovskogo AMN SSSR (dir. - prof. P.N.  
Kosyakov) na baze Klinicheskoy infektsionnoy bol'nitsy No. 2  
(glavnnyy vrach A.M.Pyl'tsova).

(ADENOVIRUS INFECTIONS) (INFLUENZA)  
(RESPIRATORY ORGANS—DISEASES)

KETILADZE, Ye.S., dotsent; SOROKINA, Ye.Yu.; BOKOVA, Ye.V.; ZAKSTEL'SKAYA, L.Ya.; YAKHNO, M.A.; DREYZIN, R.S.; NISEVICH, L.L.

Parainfluenza diseases in adults; clinical aspects and diagnosis.  
Sov.med. 28 no.3:53-60 Mr '65. (MIRA 18:10)

1. Klinicheskiy otdel (nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR prof. A.F.Bilibin; zav. - dotsent Ye.S.Ketiladze) Instituta virusologii imeni D.I.Ivanovskogo AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. V.M.Zhdanov) na baze Gorodskoy klinicheskoy infektsionnoy bol'nitsy Nr. 82 (glavnnyy vrach - kand. med.nauk A.V.Yeremyan), Moskva.

L 21943-66 EWT(m)  
ACC NR: AP6014656

SOURCE CODE: UR/0241/65/010/008/0047/0055

AUTHOR: Svyatukhin, M. V.; Sorokina, Yu. D.

ORG: Laboratory of the Radiation Factors of Carcinogenesis /headed by Professor M. V. Svyatukhin/, Institute of Experimental and Clinical Oncology, AMN SSSR, Moscow (Laboratoriya luchevykh faktorov kantserogeneza Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR)

20  
3

TITLE: Restorative postradiation processes and their relation to radiation leukosis 1965

SOURCE: Meditsinskaya radiologiya, v. 10, no. 8, 1965, 47-55

TOPIC TAGS: x ray irradiation, radiation injury, radiation biologic effect

ABSTRACT: Since the thymus is considered a major factor in the mechanism of the genesis of lymphatic leukosis as a result of irradiation, the authors present the results of experimental observations of the restorative processes in the thymus of mice subjected to whole-body x-irradiation with lymphatic leukosis as a corollary. It is shown that, following the whole-body irradiation of the mouse thymus, the resulting extensive destruction of its lymphoid cells is gradually superseded by a process of recovery; the smaller the radiation injury, the earlier this process begins and the faster it proceeds. Thus, after irradiation with a dose of 150 r the recovery rate of the lymphoid cells significantly exceeds the growth rate of the radiation-induced lymphomas. After irradiation with a dose of 540 r the recovery rate is either the same as

UDC: 616-006.446-092.9-02:616-001.267-092

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ACC NR: AP6014656

or slightly higher than the growth rate of the lymphomas. After repeated irradiation (four doses of 200 r each, or 800 r) the recovery proceeds at a slower rate (1 1/2 to 2 months from date of last irradiation), compared with the normal 10-day recovery period of the thymus. Further, it is shown that combining whole-body irradiation with urethane anesthesia not only compounds the destructive changes in the thymus but also retards the restorative processes. Particularly indicative in this sense is the delayed rise in the mitotic coefficient. Orig. art. has: 8 figures and 2 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 10Jan65 / ORIG REF: 002 / OTH REF: 003

Card 2/2 JV

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75997  
SOV/70-4-5-19/36

AUTHORS: Kolontsova, Ye. V., Sorokina, Yu. G., Telegina, I. V.

TITLE: Study of the Twinning of Calcite Crystals by a Narrow X-Ray Beam and Etching

PERIODICAL: Crystallorafiya, 1959, Vol 4, Nr 5, pp 742-748 (USSR)

ABSTRACT: The existing four concepts on the nature of atomic dislocations at glide bands and publications on the subject such as by Kontorova, T. A., Kolesnikov, G., Plavnik, G. M., Rays, G. B. and others, are cited. Imprinting a sharp knife into calcite crystals, the authors produced glide bands, "twins," and examined them under polarization and electron microscopes and by etching. Thus, the parts of the crystals for an X-ray study and the coordinate axes were selected. The etch pits proved to be most dense and large at the margins of glide bands. Some dislocation planes crossed the crystals, 2 mm thick, from one face to the opposite one, while the etch pits corresponding to other dis-

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Study of the Twinning of Calcite Crystals by a  
Narrow X-Ray Beam and Etching

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locations disappeared after a deeper etching. The X-ray photographs were taken from: (1) the undistorted parts of the crystals, at least 0.5 mm from the margins and glide bands; (2) the boundaries of glide bands, i. e. including both the distorted and undistorted parts of the crystals; (3) glide bands, 0.5 mm off the band boundary. The crystals under test were oriented parallel to  $\langle 110 \rangle$  with an accuracy of  $\pm 6-10'$ . The X-ray diffraction patterns from all the three parts were identical; no additional reflections were noticed in one or another part. The diffraction spots on the photos, taken by a narrow beam (15 to  $20\mu$ -wide slit), exhibit a slight asterism; the diffuse branches extend in one or two directions. The most dense dislocations are confined to  $10^{-7}$  to  $10^{-6}$  cm zones at the margins of glide bands. This corresponds to tens or hundreds of the interatomic distances. The greater depth of pits within this zone points to deeper penetration of crystals by dislocations and the larger lateral extention of pits indicates a lower stability

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Study of the Twinning of Calcite Crystals by a  
Narrow X-Ray Beam and Etching

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of the distorted bands, i. e. the existence of internal stresses within them. No conclusions can be drawn of the fact that 15 to 20  $\mu$ -wide beams failed to detect additional reflections at the band boundaries, since the narrow zones of junction of distorted and undistorted parts should be examined by beams of the order of 1  $\mu$  wide. There are 7 figures; and 11 references, 7 Soviet, 2 U.K., 2 U.S. The U.S. and U.K. references are: F. Vogel and others, Phys. Rev., 90, 3, 489 (1953); J. Gilman, W. Johnson, J. Appl. Phys., 27, 9 (1956) E. O. Hall, Twinning and Diffusionless Transformations in Metals (1954); A. H. Cottrell, Dislocations and Plastic Flow in Crystals (1953).

ASSOCIATION: Moscow State University imeni M. V. Lomonosov  
(Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova)

SUBMITTED: February 7, 1959  
Card 3/3

YUGANOVA, S.A., kand.tekhn.nauk; SOROKINA, Yu.G., inzh.

Structure of oxidation films and the scale resistance of  
pearlitic steel depending on alloy additions. Metalloved.  
i term. obr. met. no.6:53-56 Je '61. (MIRA 14:6)

l. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii  
mashinostroyeniya.  
(Steel alloys—Metallography)  
(Metallic films)

MIRKIN, I.L., doktor tekhn.nauk, prof.; YUGANOVA, S.A., kand.fiz.-matem.nauk;  
SOROKINA, Yu.G., inzh.

—Kinetic peculiarities of the aging of nickel-base alloys.  
Metalloved. i term. obr. met. no.7:14-20 Jl '62. (MIRA 15:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii  
i mashinostroyeniya.  
(Nickel alloys—Hardening)

L 56071-65 EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) Pad/

Ps-4 IJP(c) JD/HW/JG

ACCESSION NR: AP5013813

UR/0126/65/019/005/0757/0761  
620.193.91

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B

AUTHOR: Yuganova, S. A. & Duel', N.A.; Sorokina, Yu. G.

TITLE: Growth kinetics of  $\gamma'$ -phase particles during the aging of Ni-Cr alloys with different Al/Ti ratios

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 5, 1965, 757-761

TOPIC TAGS: gamma' phase, aluminum titanium ratio, nichrome alloy, phase electromicroscopy, alloy aging, aging time, Brinell hardness

ABSTRACT: The growth kinetics of three alloys of the Ni-Cr-Al-Ti system, single-phase above 1000°C and two-phase ( $\gamma$  and  $\gamma'$ -phases) at 750°C, with different Al/Ti ratios (8:3, 3:8, 1:8), was investigated in the course of their prolonged aging. These alloys were first hardened (3 hr at 1200°C, quenching in water) and aged at 750°C for 3 to 5000 hr. The particle size of the  $\gamma'$ -phase was estimated by two methods: X-ray, according to the width of the (111) line of the isolated  $\gamma'$ -phase; and electromicroscopic, according to replicas with fixed particles of this phase. X-ray examination

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ACCESSION NR: AP5013813

proved to be within the limits of acceptable error (not more than 8-9%) only for the metal aged for not longer than 100 hr. It revealed that prolonging the aging duration from 3 to 100 hr increases roughly threefold the dimensions of the blocks of  $\gamma'$ -phase. Given the same aging time, the size of these blocks increases with increasing Al/Ti ratio. Electron-microscopic examination yielded sufficiently accurate results for particles of a size not exceeding  $5 \cdot 10^{-6}$  cm, and it revealed that the linear size of the particles increases, and the number of particles per unit surface area decreases, as the aging time increases from 3 to 5000 hr. The decrease in the number of particles is the more sharp the higher the Al/Ti ratio is, up to the 1000-hr limit, beyond which this decrease is the same in all three alloys regardless of their Al/Ti ratio. The observed differences in the growth rate (increase in size, decrease in number) of  $\gamma'$ -phase particles as a function of the Al/Ti ratio are attributed to the degree of distortion of the crystal lattice near the interface between the excess  $\gamma'$ -phase and the matrix. The increase in the mean linear size of  $\gamma'$ -phase particles in the investigated alloys during their aging at 750°C obeys the equation:  $D_t = At^{0.4}$ , where  $D_t$  is the mean

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linear size for a given  $t$ ;  $A$  is a coefficient, and  $t$  is aging time. The experimentally established relation of particle size to aging time is in agreement with Zener's (C. Zener, J. App. Phys., 1949, 20, 10, 950) theory of the  $S \sim t^{0.5}$  law of the growth of spherically shaped particles from a supersaturated solid solution (where  $S$  is particle radius). On the other hand, no relationship could be found between the number and size of the particles and Brinell hardness, up to a point. Orig. art. has: 4 figures, 1 table.

ASSOCIATION: TsNITMASH, Moscow

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SUB CODE: MM, SS

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NO REF Sov: 007

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S/0241/64/009/003/0070/0074

AUTHOR: Turgunov, M. B.; Sorokina, Yu. D.; Turusov, V. S.

TITLE: Effect of 5-methoxytryptamine on skin changes induced by ionizing irradiation of mice and rats

SOURCE: Meditsinskaya radiologiya, v. 9, no. 3, 1964, 70-74

TOPIC TAGS: radioprotective preparation, 5-methoxytryptamine, radioprotective action, total X-irradiation, local beta-irradiation, large dose beta-irradiation, skin change, hair follicle, hair growth, hair follicle connective tissue, hair follicle epithelium, cell regeneration

ABSTRACT: To test the effectiveness of 5-methoxytryptamine radioprotective action, one group of 59 black mice was exposed to total X-irradiation of 700 r (RUM-11 unit, 180 kv, 10 ma, focal length 30 cm, 33 r/min) and another group of 18 white mice was exposed to local irradiation of the spine (65X23 mm section) with beta rays ( $Ce^{144}$ , 500,000 erg/cm<sup>2</sup> dose for 11 min). Ten min before irradiation half of the mice in each group were injected intraperitoneally with .04 ml 5-methoxytryptamine in a physiological solution

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(75 mg/kg), and the other half of each group was injected with only the physiological solution. The animals were killed 1, 3, 5, 7, 15 and 30 days after irradiation for histological examination of hair follicles and skin layers. It was found that total X-irradiation affects the epithelial part of the hair follicle, and local beta irradiation in large doses affects the connective tissue as well as the epithelial part of the hair follicle. The radioprotective action of 5-methoxytryptamine with both types of radiation is indicated by the later appearance of hair follicle radiation damage in less severe form and by earlier regeneration of cells. Reaction of skin and hair growth to irradiation is suggested as a convenient and fast method for testing the effectiveness of radioprotective preparations. Orig. art. has; 2 figures.

ASSOCIATION: Laboratoriya luchevykh faktorov kantserogeneza otdela kantserogennykh agentov instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (Laboratory of Radiation Factors of Carcinogenesis of the Department of Carcinogenic Agents of the Institute of Experimental and Clinical Oncology AMN SSSR)

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Sub: 3 June 63

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(ROENTGENOGRAPHY  
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